Author Index

Akasaka, T., see Hashimoto, A. (1183) 397
Allen, J.F., see Silverstein, T. (1183) 215
Allen, R., see Nalbantoglu, B. (1183) 557
Andersson, B., see Tjus, S.E. (1183) 315
Angov, E. and Brusilow, W.S.A.
Effects of deletions in the *uncA-uncG* intergenic regions on expression of *uncG*, the gene for the γ subunit of the *Escherichia coli* F_1F_o-ATPase (1183) 499
Aoki, H. and Ida, S.
Nucleotide sequence of a rice root ferredoxin-$NADP^+$ reductase cDNA and its induction by nitrate (1183) 553

Bassi, R., see Jennings, R.C. (1183) 194
Bauscher, M., Leonhard, M., Moss, D.A. and Mäntele, W.
Binding and interaction of the primary and the secondary electron acceptor quinones in bacterial photosynthesis. An infrared spectroelectrochemical study of *Rhodobacter sphaeroides* reaction centers (1183) 59
Bendall, D.S., see Manasse, R.S. (1183) 361
Blackwell, M., Gibas, C., Gygax, S., Roman, D. and Wagner, B.
The plastoquinone diffusion coefficient in chloroplasts and its mechanistic implications (1183) 533
Bönigk, B., see Lendzian, F. (1183) 139
Brown, S., Rumbley, J.N., Moody, A.J., Thomas, J.W., Gennis, R.B. and Rich, P.R.
Flash photolysis of the carbon monoxide compounds of wild-type and mutant variants of cytochrome *bo* from *Escherichia coli* (1183) 521
Brul, S., Veltman, R.H., Lombardo, M.C.P. and Vogels, G.D.
Molecular cloning of hydrogenosomal ferredoxin cDNA from the anaerobic amoeboflagellate *Psalteriomonas lanterna* (1183) 544
Brusilow, W.S.A., see Angov, E. (1183) 499

Chance, B., see Powers, L. (1183) 504
Cheng, L., see Silverstein, T. (1183) 215
Choo, H.L., see Ng, L.T. (1183) 180
Crielaard, W., Visschers, R.W., Fowler, G.J.S., Van Grondelle, R., Hellingwerf, K.J. and Hunter, C.N.
Probing the B800 bacteriochlorophyll binding site of the accessory light-harvesting complex from *Rhodobacter sphaeroides* using site-directed mutants. I. Mutagenesis, effects on binding, function and electrochromic behaviour of its carotenoids (1183) 473
Crielaard, W., see Leguijt, T. (1183) 292
Crielaard, W., see Visschers, R.W. (1183) 483
Crofts, A.R., see Kramer, D.M. (1183) 72
Curir, P., see Tollin, G. (1183) 309
Cusanovich, M.A., see Tollin, G. (1183) 309

Daifuku, K., see Mukai, K. (1183) 323
Dainese, P., see Jennings, R.C. (1183) 194
Dennenberg, R.J., see Jursinic, P.A. (1183) 281
Dreyer, J.-L., see Zurbriggen, R. (1183) 513
Driessen, A.J.M., see Palmen, R. (1183) 417
Dubinsky, Z., see Mauzerall, D. (1183) 123

Ehrenheim, A.M., see Forti, G. (1183) 408
Endeward, B., see Lendzian, F. (1183) 139

Fawley, M.W.
Structure of a prasinoxanthin-chlorophyll *a*/*b* light-harvesting complex of the green flagellate *Pseudoscourfieldia marina* (Micromonadophyceae) (1183) 85
Feher, G., see Lendzian, F. (1183) 139
Forti, G. and Ehrenheim, A.M.
The role of ascorbic acid in photosynthetic electron transport (1183) 408
Fowler, G.J.S., see Crielaard, W. (1183) 473
Fowler, G.J.S., see Visschers, R.W. (1183) 483
Freiberg, A., see Timpmann, K. (1183) 185
Furukawa, T., see Taketani, S. (1183) 547

Gardeström, P.
Metabolite levels in the chloroplast and extrachloroplast compartments of barley leaf protoplasts during the initial phase of photosynthetic induction (1183) 327
Garlaschi, F.M., see Jennings, R.C. (1183) 194
Gatzen, G., see Vass, I. (1183) 388
Gennis, R.B., see Brown, S. (1183) 521
Gibas, C., see Blackwell, M. (1183) 533
Gnaiger, E., see Von Stockar, U. (1183) 221
Gottstein, J., Scherz, A. and Scheer, H.
Bacteriochlorophyll aggregates in positively charged micelles (1183) 413
Grodzitzki, D., see Riedel, A. (1183) 263
Gustafsson, L., see Von Stockar, U. (1183) 221
Gygax, S., see Blackwell, M. (1183) 533

Hashimoto, A., Akasaka, T. and Yamamoto, Y.
Characteristics of the assembly of the 33 kDa oxygen-evolving complex protein in the etioplasts and the developing chloroplasts of barley seedlings (1183) 397
Haumann, M., see Lübbers, K. (1183) 210
Hauska, G., see Riedel, A. (1183) 263
Hayashi, M., see Unemoto, T. (1183) 201
Hayashi, Y., see Mutoh, N. (1183) 550
Hellingwerf, K.J., see Crielaard, W. (1183) 473
Hellingwerf, K.J., see Leguijt, T. (1183) 292
Hellingwerf, K.J., see Palmen, R. (1183) 417
Hirasawa, M., see Nalbantoglu, B. (1183) 557
Hirata, H., see Muneyuki, E. (1183) 171
Holzwarth, A.R., see Mullineaux, C.W. (1183) 345
Holzwarth, A.R., see Vass, I. (1183) 388
Horton, P., see Noctor, G. (1183) 339
Huber, M., see Lendzian, F. (1183) 139
Hunter, C.N., see Crielaard, W. (1183) 473
Hunter, C.N., see Visschers, R.W. (1183) 483
Hynninen, P.H. and Lötjönen, S.
Effects of $\pi-\pi$ interactions on the ^{1}H-NMR spectra and solution structures of pheophytin *a* and *a'* dimers (1183) 374
Hynninen, P.H. and Lötjönen, S.
Hydrogen bonding of water to chlorophyll *a* and its derivatives as detected by ^{1}H-NMR spectroscopy (1183) 381

Ida, S., see Aoki, H. (1183) 553
Ikematsu, M., see Muneyuki, E. (1183) 171

Inoue, K., see Mukai, K. (1183) 323
Isaacson, R.A., see Lendzian, F. (1183) 139
Iseki, M., see Muneyuki, E. (1183) 171
Ishizuka, M., see Sone, N. (1183) 130
Itoh, S., see Mukai, K. (1183) 323

Jennings, R.C., Garlaschi, F.M., Bassi, R., Zucchelli, G., Vianelli, A. and Dainese, P.
A study of Photosystem II fluorescence emission in terms of the antenna chlorophyll-protein complexes (1183) 194
Jirsakova, V. and Reiss-Husson, F.
Isolation and characterisation of the core light-harvesting complex B875 and its subunit form, B820, from *Rhodocyclus gelatinosus* (1183) 301
Joliot, A., see Verméglio, A. (1183) 352
Joliot, P., see Verméglio, A. (1183) 352
Jung, C., see Schulze, H. (1183) 491
Junge, W., see Lübbers, K. (1183) 210
Jursinic, P.A. and Dennenberg, R.J.
The relationship between the capacity to evolve oxygen and the variable fluorescence of chlorophyll after microsecond illumination in *Chlorella*, pea leaves and pea thylakoids (1183) 281
Jursinic, P.A., see Stemler, A. (1183) 269

Keefe, R.G. and Maier, R.J.
Purification and characterization of an O_2-utilizing cytochrome-*c* oxidase complex from *Bradyrhizobium japonicum* bacteroid membranes (1183) 91
Kellner, E., see Riedel, A. (1183) 263
Knaff, D.B., see Nalbantoglu, B. (1183) 557
Kohno, H., see Taketani, S. (1183) 547
Konings, W.N., see Poolman, B. (1183) 5
Kramer, D.M. and Crofts, A.R.
The concerted reduction of the high- and low-potential chains of the *bf* complex by plastoquinol (1183) 72
Krupka, R.M.
Coupling mechanisms in ATP-driven pumps (1183) 114
Krupka, R.M.
Coupling mechanisms in active transport (1183) 105

Lanyi, J.K.
Proton translocation mechanism and energetics in the light-driven pump bacteriorhodopsin (1183) 241
Larsson, C., see Von Stockar, U. (1183) 221
Lauraeus, M., see Powers, L. (1183) 504
Leguijt, T., Parot, P., Verméglio, A., Crielaard, W. and Hellingwerf, K.J.
Properties of the primary and secondary quinone electron acceptors in RC/LH_1 complexes from the purple sulfur bacterium *Ectothiorhodospira mobilis* (1183) 292
Lendzian, F., Huber, M., Isaacson, R.A., Endeward, B., Plato, M., Bönigk, B., Möbius, K., Lubitz, W. and Feher, G.
The electronic structure of the primary donor cation radical in *Rhodobacter sphaeroides* R-26: ENDOR and TRIPLE resonance studies in single crystals of reaction centers (1183) 139
Leonhard, M., see Bauscher, M. (1183) 59
Liebl, U., see Riedel, A. (1183) 263
Lombardo, M.C.P., see Brul, S. (1183) 544
Lötjönen, S., see Hynninen, P.H. (1183) 374
Lötjönen, S., see Hynninen, P.H. (1183) 381
Lübbers, K., Haumann, M. and Junge, W.
Photosynthetic water oxidation under flashing light. Oxygen release, proton release and absorption transients in the near ultraviolet – a comparison between thylakoids and a reaction-centre core preparation (1183) 210
Lubitz, W., see Lendzian, F. (1183) 139

Maier, R.J., see Keefe, R.G. (1183) 91
Manasse, R.S. and Bendall, D.S.
Characteristics of cyclic electron transport in the cyanobacterium *Phormidium laminosum* (1183) 361
Mäntele, W., see Bauscher, M. (1183) 59
Marc-Martin, S., Spielmann, A., Stutz, E. and Schürmann, P.
Cloning and sequencing of a corn (*Zea mays*) nuclear gene coding for the chloroplast specific catalytic subunit of ferredoxin-thioredoxin reductase (1183) 207
Marchesini, A., see Tollin, G. (1183) 309
Marison, I., see Von Stockar, U. (1183) 221
Mauzerall, D. and Dubinsky, Z.
Interactions among the Photosystem II oxygen-forming complexes: a novel model for damping of O_2 oscillations (1183) 123
Meyer, T.E., see Tollin, G. (1183) 309
Mizukami, A., see Muneyuki, E. (1183) 171
Möbius, K., see Lendzian, F. (1183) 139
Moody, A.J., see Brown, S. (1183) 521
Moomaw, C., see Nalbantoglu, B. (1183) 557
Moreno-Sanchez, R., see Rottenberg, H. (1183) 161
Morimoto, H., see Mukai, K. (1183) 323
Moss, D.A., see Bauscher, M. (1183) 59
Mukai, K., Itoh, S., Daifuku, K., Morimoto, H. and Inoue, K.
Kinetic study of the quenching reaction of singlet oxygen by biological hydroquinones and related compounds (1183) 323
Müller, A., see Riedel, A. (1183) 263
Mullineaux, C.W. and Holzwarth, A.R.
Effect of Photosystem II reaction centre closure on fluorescence decay kinetics in a cyanobacterium (1183) 345
Muneyuki, E., Ikematsu, M., Iseki, M., Sugiyama, Y., Mizukami, A., Ohno, K., Yoshida, M. and Hirata, H.
Direct transmembraneous reconstitution of bacteriorhodopsin into planar phospholipid bilayers (1183) 171
Mutoh, N. and Hayashi, Y.
Molecular cloning and nucleotide sequencing of *Schizosaccharomyces pombe* homologue of the class II fructose-1,6-bisphosphate aldolase gene (1183) 550

Nalbantoglu, B., Hirasawa, M., Moomaw, C., Nguyen, H., Knaff, D.B. and Allen, R.
Cloning and sequencing of the gene encoding spinach ferredoxin-dependent glutamate synthase (1183) 557
Ng, L.T., Selwyn, M.J. and Choo, H.L.
Inorganic phosphate is the major component of the thermostable cytoplasmic fraction which stimulates mitochondrial anion uniport (1183) 180
Nguyen, H., see Nalbantoglu, B. (1183) 557
Nitschke, W., see Riedel, A. (1183) 263
Noctor, G., Ruban, A.V. and Horton, P.
Modulation of ΔpH-dependent nonphotochemical quenching of chlorophyll fluorescence in spinach chloroplasts (1183) 339

Ogura, T., see Unemoto, T. (1183) 201
Ohno, K., see Muneyuki, E. (1183) 171

Palmen, R., Driessen, A.J.M. and Hellingwerf, K.J.
Bioenergetic aspects of the translocation of macromolecules across bacterial membranes (1183) 417
Papageorgiou, G.C., see Stamatakis, C. (1183) 333
Parot, P., see Leguijt, T. (1183) 292
Plato, M., see Lendzian, F. (1183) 139
Poolman, B. and Konings, W.N.
Secondary solute transport in bacteria (1183) 5
Powers, L., Lauraeus, M., Reddy, K.S., Chance, B. and Wikström, M.
Structure of the binuclear heme iron-copper site in the quinol-oxidizing cytochrome aa_3 from *Bacillus subtilis* (1183) 504

Reddy, K.S., see Powers, L. (1183) 504
Reiss-Husson, F., see Jirsakova, V. (1183) 301
Rich, P.R., see Brown, S. (1183) 521
Riedel, A., Kellner, E., Grodzitzki, D., Liebl, U., Hauska, G., Müller, A., Rutherford, A.W. and Nitschke, W.
The [2Fe-2S] centre of the cytochrome *bc* complex in *Bacillus firmus* OF4 in EPR: an example of a menaquinol-oxidizing Rieske centre (1183) 263
Ristau, O., see Schulze, H. (1183) 491
Robert, B., see Visschers, R.W. (1183) 369
Roman, D., see Blackwell, M. (1183) 533
Rottenberg, H. and Moreno-Sanchez, R.
The proton pumping activity of H^+-ATPases: an improved fluorescence assay (1183) 161
Ruban, A.V., see Noctor, G. (1183) 339
Rumbley, J.N., see Brown, S. (1183) 521
Rutherford, A.W., see Riedel, A. (1183) 263

Scheer, H., see Gottstein, J. (1183) 413
Scherz, A., see Gottstein, J. (1183) 413
Schönfeld, P., see Wojtczak, L. (1183) 41
Schulze, H., Ristau, O. and Jung, C.
The proton activity at cryogenic temperatures – a possible influence on the spin state of the heme iron of cytochrome $P\text{-}450_{cam}$ in supercooled buffered solutions (1183) 491
Schürmann, P., see Marc-Martin, S. (1183) 207
Selwyn, M.J., see Ng, L.T. (1183) 180
Silverstein, T., Cheng, L. and Allen, J.F.
Redox titration of multiple protein phosphorylations in pea chloroplast thylakoids (1183) 215
Silverstein, T.P.
Transmembrane measurements across bioenergetic membranes (1183) 1
Somogyi, R., see Stucki, J.W. (1183) 453
Sone, N., Tano, H. and Ishizuka, M.
The genes in the thermophilic cyanobacterium *Synechococcus vulcanus* encoding cytochrome-*c* oxidase (1183) 130
Spielmann, A., see Marc-Martin, S. (1183) 207
Stamatakis, C. and Papageorgiou, G.C.
Stabilization of Photosystem II particles isolated from the thermophilic cyanobacterium *Phormidium laminosum* with glycinebetaine and glycerol (1183) 333
Stemler, A. and Jursinic, P.A.
Oxidation-reduction potential dependence of formate binding to Photosystem II in maize thylakoids (1183) 269
Stucki, J.W. and Somogyi, R.
A dialogue on Ca^{2+} oscillations: An attempt to understand the essentials of mechanisms leading to hormone-induced intracellular Ca^{2+} oscillations in various kinds of cell on a theoretical level (1183) 453
Stutz, E., see Marc-Martin, S. (1183) 207
Sugiyama, Y., see Muneyuki, E. (1183) 171
Sundström, V., see Timpmann, K. (1183) 185

Taketani, S., Kohno, H., Furukawa, T., Yoshinaga, T. and Tokunaga, R.
Molecular cloning, sequencing and expression of cDNA encoding human coproporphyrinogen oxidase (1183) 547
Tano, H., see Sone, N. (1183) 130
Thomas, J.W., see Brown, S. (1183) 521
Timpmann, K., Zhang, F.G., Freiberg, A. and Sundström, V.
Detrapping of excitation energy from the reaction centre in the photosynthetic purple bacterium *Rhodospirillum rubrum* (1183) 185
Tissot, P., see Von Stockar, U. (1183) 221
Tjus, S.E. and Andersson, B.
Loss of the trans-thylakoid proton gradient is an early event during photoinhibitory illumination of chloroplast preparations (1183) 315
Tokunaga, R., see Taketani, S. (1183) 547
Tollin, G., Meyer, T.E., Cusanovich, M.A., Curir, P. and Marchesini, A.
Oxidative turnover increases the rate constant and extent of intramolecular electron transfer in the multicopper enzymes, ascorbate oxidase and laccase (1183) 309

Unemoto, T., Ogura, T. and Hayashi, M.
Modifications by Na^+ and K^+, and the site of Ag^+ inhibition in the Na^+-translocating NADH-quinone reductase from a marine *Vibrio alginolyticus* (1183) 201

Van Grondelle, R., see Crielaard, W. (1183) 473
Van Grondelle, R., see Visschers, R.W. (1183) 369
Van Grondelle, R., see Visschers, R.W. (1183) 483
Vass, I., Gatzen, G. and Holzwarth, A.R.
Picosecond time-resolved fluorescence studies on photoinhibition and double reduction of Q_A in Photosystem II (1183) 388
Veltman, R.H., see Brul, S. (1183) 544
Verméglio, A., Joliot, P. and Joliot, A.
The rate of cytochrome c_2 photooxidation reflects the subcellular distribution of reaction centers in *Rhodobacter sphaeroides* Ga cells (1183) 352
Verméglio, A., see Leguijt, T. (1183) 292
Vianelli, A., see Jennings, R.C. (1183) 194
Visschers, R.W., Crielaard, W., Fowler, G.J.S., Hunter, C.N. and Van Grondelle, R.
Probing the B800 bacteriochlorophyll binding site of the accessory light-harvesting complex from *Rhodobacter sphaeroides* using site-directed mutants. II. A low-temperature spectroscopy study of structural aspects of the pigment-protein conformation (1183) 483
Visschers, R.W., Van Grondelle, R. and Robert, B.
Resonance Raman spectroscopy of the B820 subunit of the core antenna from *Rhodospirillum rubrum* G9 (1183) 369
Visschers, R.W., see Crielaard, W. (1183) 473
Vogels, G.D., see Brul, S. (1183) 544
Von Stockar, U., Gustafsson, L., Larsson, C., Marison, I., Tissot, P. and Gnaiger, E.
Thermodynamic considerations in constructing energy balances for cellular growth (1183) 221

Wagner, B., see Blackwell, M. (1183) 533
Wikström, M., see Powers, L. (1183) 504
Wojtczak, L. and Schönfeld, P.
Effect of fatty acids on energy coupling processes in mitochondria (1183) 41

Yamamoto, Y., see Hashimoto, A. (1183) 397
Yoshida, M., see Muneyuki, E. (1183) 171
Yoshinaga, T., see Taketani, S. (1183) 547

Zhang, F.G., see Timpmann, K. (1183) 185
Zucchelli, G., see Jennings, R.C. (1183) 194
Zurbriggen, R. and Dreyer, J.-L.
An NADH-diaphorase is located at the cell plasma membrane in a mouse neuroblastoma cell line NB41A3 (1183) 513